

**ABSTRACT**

A venetian blind dynode 5A of the first stage collects incident electrons efficiently, multiplies these electrons, and emits the multiplied secondary electrons to a metal channel dynode 5B of the second stage.

5 By metal channel dynodes 5B of the second stage onward successively multiplying the incident secondary electrons efficiently, the secondary electrons, which are multiplied in multiple stages, are detected efficiently as an electrical signal. Since the layered state of metal channel dynodes 5B of the second stage onward can be made thin, the  
10 total length of the dynode unit in the layering direction can be made short and compact.